

THE IMPLEMENTATION OF A GREEN OFFICE AT JAMK CASE: DYNAMO CAMPUS

William Chisala

Bachelor's Thesis

May 2013

Degree programme in Facility Management
School of Business and Services Management



JYVÄSKYLÄN AMMATTIKORKEAKOULU
JAMK UNIVERSITY OF APPLIED SCIENCES



Author(s) CHISALA, William	Type of publication Bachelor's Thesis	Date 4.3.2013
	Pages 49	Language English
	Confidential () Until	Permission for web publication ()
Title THE IMPLEMENTATION OF GREEN OFFICE CASE DYNAMO CAMPUS		
Degree Programme Degree Programme in Facility Management		
Tutor(s) HINTIKKA-MÄKINEN, Kirsti		
Assigned by JAMK University of Applied Sciences		
<p>Abstract</p> <p>The objective of the report was to analyse and know the current situation of the Green Office initiative at the JAMK University of Applied Sciences Dynamo Campus and to find out what kind of steps should be followed in implementing the programme. Furthermore, the thesis also considered the principles and benefits of a green office as well as the main principles and requirements of the green office concept.</p> <p>The main research question was: What is the current situation concerning the Green Office concept at JAMK University of Applied Sciences? The aim of the question was to define the practices followed, so far, by JAMK in the implementation of the concept according to its elements and requirements.</p> <p>Qualitative research was used in this thesis through interviews with open-ended questions, and the data consist of verbatim quotations with a sufficient context in order to be interpretable. Literature, articles and web publications were also used to collect data for the research.</p> <p>The results show that JAMK has already done a lot, but much more needs to be done. The results in general show that the green office concept is very important in organizations due to its numerous benefits. The concept needs the commitment of all the parties in an organization. The attitudes of people are also important, and lastly, continuous improvement is necessary.</p>		
Keywords Green, office, implementation, environmental management system		
Miscellaneous		

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1 INTRODUCTION

A companies' Environmental performance is very important nowadays when it comes to organisations providing goods or services. A wide range of benefits can be obtained if the business is environmentally friendly at the same time meeting the terms of the environmental legislation. "Key environmental issues include industrial waste, sustainable development of raw materials, water and air emissions "(Williams, 2012). According to Hitchcock and Willard (2009, 22), sustainability is a growing and strategic field. It helps foresee the future and often produces unintended benefits.

In such a case, many environmental management systems and concepts have been put in place in organizations in order to be friendlier to the environment, and at the same time, obtain benefits e.g. the green office concept. "Despite struggling in this economy, companies are moving forward on implementing environmental plans to reduce their carbon footprint and address the climate change" (Carbon Management and Offsetting trends Survey Report, 2009).

Most companies also go green in order to comply with the environmental legislation and gain a competitive advantage in the market place by becoming more responsive to customer concerns improving their reputation (Green office for dummies 2009, 6). Some customers are more environmentally conscious which leads to choosing products or services which are environmentally sustainable. In addition, if a company's competitors go green they are more likely to follow suite and try to improve or have added value to their green initiative.

JAMK University of Applied Sciences like any other organizations face challenges in the near future which will require them to save a certain amount of money because funding may not just be enough to tackle all the issues in a big school like this. There are several environmental concepts and programmes at the moment which organisations practice enabling them to save a considerable amount of money with the savings used for other issues. There are also several institutions of higher learning that have undertaken such concepts or other environmental issues on their campuses. Such environmental practices are not only they beneficial to the institutions but also to the students because they can learn about environmental friendliness in practice.

The objective of this thesis is to analyse and know the current situation of the Green Office initiative on the JAMK University of Applied Sciences Dynamo Campus and to find out what kinds of steps should be followed in implementing the programme. Furthermore, the thesis will also consider the principles and benefits of a green office as well as why an organization should undertake this concept. Most importantly, it will emphasize the main principles and requirements of the green office concept.

This will reveal what practices are already in place and which ones need to be reviewed or removed in compliance with the green office principles. This step will also include interviews of the JAMK staff in charge of the green office initiative to get clear information on why the school is considering this concept.

A Qualitative method of research was utilized in this report in order to obtain information with the objective being to give a clear picture from the practical point of view. The reason for qualitative research is to study a real-world setting, discover how people cope and thrive in that setting –and

capture the contextual richness of everyday lives (R.K. Yin 2011, 3-4). As part of the research, quantitative data was also collected to get precise measurements of the particular subject matter i.e. Green Office.

2 ENVIRONMENTAL MANAGEMENT SYSTEMS

In this particular chapter, the environmental management system is defined as well as description of examples. In addition the requirements are described and the examples are distinguished through their similarities and differences. It also outlines some benefits of implementing such management systems to an organization.

“An environmental management system abbreviated simply as EMS is an organisations management system used to develop and implement its environmental policy and environmental aspects.” There are many reasons why companies have an environmental management system (EMS) such as; “Improving the management of environmental impacts, set targets to reduce energy use, water use and waste to landfill, initiate and maintain procedures to improve efficiencies including environmentally friendly purchasing procedures and preferred business travel option, define key responsibilities for achieving targets, monitor and measure environmental performance against key indicators, regularly assess progress towards achieving set objectives as well as ensure due diligence and on-going consideration of legal and other environmental requirements” (EMS Implementation).

The Eco-management and audit scheme (EMAS) describes an EMS as part of “an overall management system that includes organisational structure and planning activities, practices responsibilities and procedures as well processes and resources. These issues play a key role in

developing, implementing, achieving, reviewing and maintaining the environmental policy” (What is EMAS, 2012). In addition, in order to achieve the goal; environmental protection an EMS is based on environmental actions and management tools which rely on each other. An EMS is an on-going process which helps pledge environmental management in all capacities. The cycle includes “Planning, implementing, reviewing and improving the environmental performance of an organisation”; as shown in the figure below:

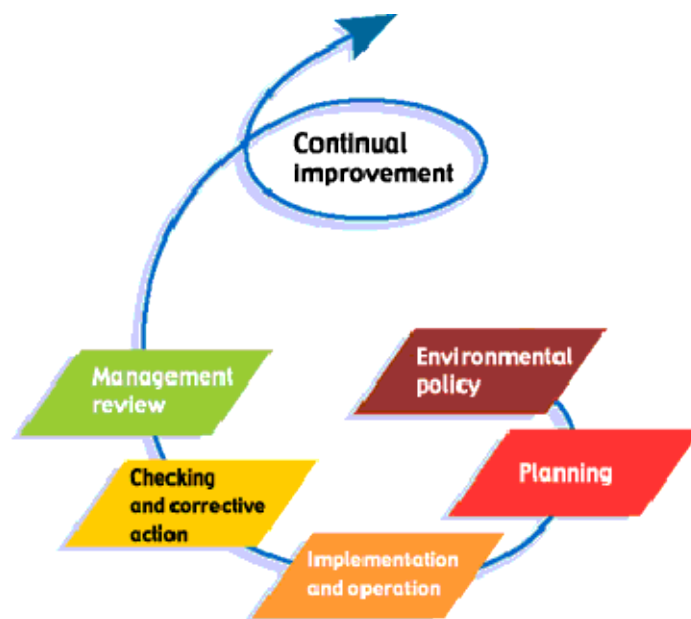


FIGURE 1: EMAS Cycle

In the firstly place an organisation’s top management pledges itself to environmental improvement and then inaugurates a “company’s’ environmental policy which is a foundation of the EMS”. “In the planning stage environmental features of its operations are classified for example air pollutants or hazardous waste with damaging effects on people and the environment”. Most important influences are regulated then the objectives and targets are established. Lastly the final part of the planning is to “devise an action plan for meeting the targets

which involves entitling responsibilities, creating a schedule clear plan describing the phases to meet the targets.”

In implementation, the action plan is seen through while utilising required resources for example human, financial etc. Employee awareness and training are significant factors. In addition, documentation, following operating procedures and creating internal and external procedures communication lines are other steps involved in the implementation and operation. The checking and corrective action involves a company observing its actions to assess whether the targets being met, if not the company takes corrective action. Finally, the management review stage encompasses the “outcomes of the evaluation to see if the EMS is working”. The consistency of the original environmental policy with the company values is determined by the company. In order to improve the efficiency of the EMS the plan is revised. This stage generates a loop of continuous improvement of the company (EPA Pollution Prevention).

2.1 ISO 4001:2004

ISO 4001:2004 as compared to EMAS can be certified to and develops principles for an environmental management system. The system outlines how an organization can pursue to form a reliable EMS but it does not basically explain the requirements for environmental performance. The utilization of ISO 4001:2004 can assure companies, employees and stakeholders that environmental performance/impact is being assessed and necessary improvements are being made (ISO).

The benefits of using the ISO 4001:2004 can somehow be similar to the Green Office and EMAS. For example; “Reduced waste management, savings in consumption and energy and materials,

lower distribution costs and develops corporate image among regulators, customers and the public” (ISO). ISO 4001 standards exist to assist organizations lower operations damaging the environmental. Furthermore, the management system is applied in any organizations that wish to develop, apply, preserve and expand an EMS (Burden, L. 2010).

The ISO 4001:2001 has a similar process as the EMAS but also they are different in some way; firstly the management must show commitment towards the system that if they choose to adopt it, from the development process, implementation to maintenance of the EMS. Managers should be aware of the standard and benefits to the organization otherwise it will be ineffective. The next step is to plan the organizations EMS through either internally depending on the skills and resources or outsourced development.

Furthermore, the third step is to simplify the aspects registers by getting the aspects right, a key to any EMS. These are any part of the organizations activities, products or services that are involved with the environment. In addition the standard has to comply with the legal requirements; organizations have to evaluate legal requirements which will prove effective. Another point is that the organization has to provide adequate resources by identifying the required resources and also setting target. Lastly, there is need for continual improvement of the standard and recognizing the market benefits (Burden, L. 2010).

The difference between ISO 4001 and EMAS is that EMAS emphasizes more on commitment to continual improvement while ISO does not. The ISO 4001 EMS requirements are a vital part of EMAS but the latter considers further aspects to support organizations the continuously improve their environmental performance (EMAS Factsheet, 2011).

3 GREEN OFFICE CONCEPT

This chapter describes WWF in brief which is in charge of the green office programme and awards the label to organizations that have fulfilled the requirements the definitions of green office from different points of view to get a clear picture of what it is. The concept has been defined in many diverse ways replicating on various viewpoints and attitudes. The chapter also outlines the goals and principles of the Green office as well as the benefits organizations can get from it.

3.1 WWF in Brief

“WWF is one the world’s largest conservation organizations conceived on 29th April 1961. It opened its first office in September 1961 in Morges, Switzerland. WWF International in now located in Gland, Switzerland. It is registered under Swiss Law and is an independent foundation with offices in more the 80 countries worldwide. It values the backing of more than 5 million people and has around 2,500 full time staff. More than 13,000 projects have been undertaken with an investment of almost US\$10 billion during the 51 years from the time when it was established”. (WWF Panda webpage)

The mission of WWF is to bring to an end to “The degradation to the earth’s natural environment and to construct a future, in which humans live in harmony with nature by conserving world’s biological diversity, certifying the utilization of renewable natural resources is sustainable and lastly encouraging pollution and waste consumption reduction”. (WWF Panda webpage)



FIGURE 2: WWF Finland Panda Green Office Logo

The figure below illustrates the growing number of WWF Finland Green Office organizations according to contract year since 2002. In numbers:

- 196 organizations is part of the WWF's Green Office network in Finland
- 181 have been granted with Green Office labeling rights
- Green Office affects over 68 500 Finnish employees' working Life
- Green Office Operates in 11 different countries
- In 2012 Green Office has been working for 10 years (WWF Finland webpage)

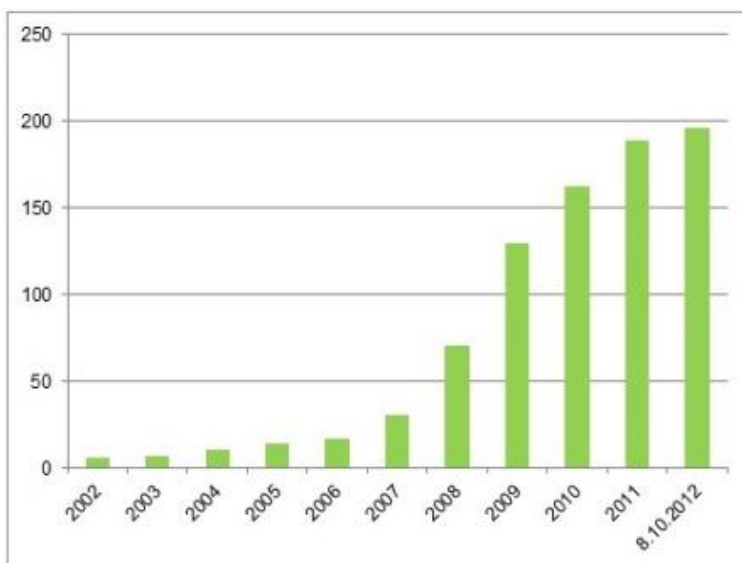


FIGURE 3: WWF's Growing Green Office Network

3.2 Green Office Definitions

Green Office is one of the concepts involved in sustainability issues which help “Offices carry out their environmental responsibility and motivates staff to sustainable solutions in everyday office work” (Green Office Environment Management System for sustainable organizations, 3).

Furthermore, the green office concept is an initiative aimed at creating a positive impact on the environment. The concept focuses on the need for organisations to practice environmental sustainability to ensure the protection of the environment.

According to the WWF Finland, “The aim of the green office programme is to offer offices a simplified environmental management and certification systems. The ultimate goal of the programme is to combat the climate change through energy efficiency and renewable, reduce natural resource use, and promote sustainable lifestyles through enhanced employee awareness.”

On the other hand, the Green Office Guide (2001) defines green office as an easy practical program to implement in an organisation and is suitable for small or large offices in private companies, public sector and other organisations. In terms of energy consumption and sustainable solutions, offices buildings consume more than any other materials in that particular premise. Practising this green office concept will make the office an energy-efficient and environmentally sustainable work environment. Companies should realise that goods and services which they utilise come with ecological impacts. An organisation can reduce energy, save money and help the environment by buying and using “green” office equipment.

Furthermore, Richmond (2007) says that the green office concept is a primarily a health-related issue that blends into the other topics of sustainability, pollution control, and conservation. By dividing out the topics properly, the plan of attack seems much clearer. Green as described elsewhere is primarily a concern for the Health Impact of our actions, whether locally or worldwide. And though these two sub-categories of environmentalism are complimentary, they are distinct and substantial areas of the greater environmental picture. (Richmond 2008)

The Green Office Environment Management System for Sustainable Organizations states that the green office concept supports companies in the organized improvement of their environmental performance. The foremost advantage of the green office is “its concreteness. It offers the involved companies with substantial objectives and ways to both reach and monitor them.” According to Richmond 2007, the definition of green is the immediate and residual impact of our products and practices. Hence, an office has both of these impacts on the environment due products and practices, most importantly the aim of the green office is to reduce such impacts.

As an environmental management system for sustainable organisations the green office is an issue which, at the moment, most organisations are taking into consideration. Businesses are making environmentally friendly decisions in their operations in order to save money or reduce costs as well as achieving energy and environmental savings. Responsible environmental practice makes good business sense and is synonymous with a well-managed organisation (The Green Office Manual 2000, 1). Most companies are beginning to realise the significance of a sustainable office environment which results in numerous benefits which can be generated.

Significantly, the green office concept encourages staff and the organization to reduce, reuse, recycle and turn off. Everyone in the organization plays a major role in reducing a company's collective environmental impact by sharing valuable sustainability tips at the workplace. The concept also implies an on-going program once an organization decides to take it into account in an attempt to make their workplace more environmentally friendly. Generally, the main focus of the green office is to make the work area and the staff create awareness of the environment in order for the organization to function effectively in a sustainable way.

According to a WWF Finland press release (2012), "the Green Office programme developed by WWF Finland has become the leading environmental scheme in Finland. The programme is expanding overseas. The Finnish Facility Management Association (FIFMA) awarded WWF's Green Office programme as the facility management act of the year."

3.3 Goals and Principles

The purpose of the green office programme is "To reduce the consumption of natural resources by improving offices' environmental efficiency, promote sustainable practices by increasing environmental awareness by employees as well as to promote climate change mitigation by requiring energy-saving and use of renewable energy sources" (Green Office Environment Management System for sustainable organizations 2011, 5).

Most importantly the employees should be on the forefront of this initiative in order for it to work because if the company's employees are not sustainable enough they will not be motivated to

have a green office in such a case motivating, training and encouraging the employees is important.

As a concept green office has its own principles that are taken into consideration in the process of implementation. The most important amongst these is to create an environmentally conscious office design that hi-tech, energy efficient, economically viable and sustainable. (United Nations Environmental Programme) Another goal is to capitalize on the use of commercially available, natural, non-toxic and recycled materials. Furthermore, the green office is designed to save on operating expenses by using products and technologies designed to minimize the consumption of energy. (United Nations Environmental Programme Webpage)

In addition one of the goals is to reduce the destruction of existing space and to dispose of any existing and new construction wreckage in an environmentally conscious manner. Designing the space in a manner that will easily accept standard product sizes to reduce waste of newly installed materials and reusing practical elements from the existing walls and furnishings and requirement to refurbish are other goals of the green office. (United Nations Environmental Programme Webpage)

Another goal is providing a healthy workstation for employees and visitors through the use of the principles of day lighting in addition to incorporation of products premeditated to filter and purify air and water. One of the principles also is demonstrating that accepting green design practices and principles can be appealingly attractive, environmentally conscious and cost competitive. Lastly a green office can also demonstrate environmental leadership that inspires similar projects

highlighting sustainability both within and outside the organization. (United Nations Environmental Programme webpage)

The WWF Finland has guidelines for the green office in order to improve office eco-efficiency. Some of these include; using computers for data management whenever possible and avoiding redundant printouts, and print on both sides of the paper followed by activating energy-saving settings on the computer and other office devices as well as turning off devices at the end of the working day. (WWF Finland webpage)

Furthermore, save energy in every possible way. If an organization is willing to offset emissions produced by your consumption of energy, the use Gold Standard-certified projects are recommended. In addition, instead of arranging business trips, the company to organize video- and telephone-conference calls. Offset emissions generated by any unavoidable business trips - Gold Standard. Most Importantly using less, re-use and recycle i.e. Sort out your office waste. Procure the most eco-friendly products and services available and acting in an environmentally friendly during free time too. (WWF Finland webpage)

In short the green office focuses on issues involving energy consumption and efficiency, waste disposal, transport, use of open spaces and materials such as paper and energy efficient printers. According to WWF Finland the purpose of the green office scheme is "To reduce the consumption of natural resources by improving offices' environmental efficiency", for example electricity, paper and heat. In addition, another purpose is to promote sustainable practices by increasing environmental awareness of employees as well as "promoting climate change mitigation by requiring energy-saving and use of renewable energy sources." (WWF Finland webpage)

The Public Works and Government Services Canada states that purpose of greening an office building means incorporation of the following features:

- Compliance with sustainable development and pollution prevention principles;
- Adoption of resource efficient practices to minimize the consumption of energy, water and other resources;
- Incorporation of the 4R's; Reduce, Reuse Recycle and Renewable, (i.e. building products, systems use and management).

According to the WWF Finland, there are Six Steps to Green Office for organizations to follow when implementing the initiative in collaboration with WWF;

- i. Gather Information – Browse green office webpages and possibility to attend the Green Office Introduction Event WWF Finland's Office
- ii. Sign a Contract – Collaboration Agreement with WWF, Admission fee is charged after signing the contract, organization will receive login information to the Green Office Extranet, Compass.
- iii. Create an Environmental management system (EMS) – The organization has a year to create a practical EMS for its office. The organization selects Green Office contact person and a Green Office team among its personnel. The organization may use web-tools provided by WWF, which can be found on the Compass.
- iv. Office Inspection - When the EMS is ready, a WWF Green Office expert will perform an inspection of office premises. The office will receive a green office diploma along with the

right to use the Green Office logo if it passes the inspection and first annual fee will be charged after inspection.

- v. Report Annually – After the organization has been granted the labeling rights, it will start to report chosen key indicators to WWF. The EMS is updated every year. Reporting is done via compass and via climate calculator. WWF sends reporting guidelines to the green office contact person.
- vi. Lastly, Develop and Improve – An office with Green office labeling rights should strive for constant development of its EMS and improvement of environmental awareness among its personnel. WWF will inspect the offices premises every 3 years. During these reviews, fulfillment of the Green Office criteria and use of the Green Office Logo will be monitored.

3.4 Benefits

According to an article in Canadian Business journal,

“An increasing number of businesses want to be in a greener building for several reasons: often costs associated with energy efficient buildings are lower in the long-term, greener buildings can help to improve their company's reputation as a good corporate citizen, and greener offices are also healthier places to work, leading to improved workplace productivity and happier, healthier employees.” (Green offices have many rewards 2011, 60-61)

- Reduces energy consumption

The International Energy Agency (IEA) has accumulated statistics as follows; photocopiers alone consume about 10% of the office equipment electricity demand and more than 90% of the energy

is consumed when photocopiers are not in use. Furthermore, “green offices save electricity by one third per person. In 2010, Finnish green offices saved a total of 2,810 tonnes of greenhouse gas emissions compared to the previous year by cutting consumption. The amount corresponds to over 426 passenger car trips around the world. The green office network includes almost 200 organizations” (WWF Press Release, 2011).

Buying and using energy-efficient equipment save money i.e. in electricity alone up to \$180 (About 140 EUR) per 1000 kilowatt hours of energy resulting in the electricity bill being cut by 80% (Green Office Guide 2001, 4). “Numerous activities from using IT solutions to switching off unnecessary lights help cut down electricity consumption” (Green Office Environment Management System for Sustainable Organizations 2011, 10). There are many environmental benefits of using energy-efficient equipment in an office. The reduction of the electricity used in turn reduces air and water pollution at power stations saving a tonne of greenhouse gas for each 1,000 kilowatt-hour of electricity saved (Green Office Guide 2001, 4)

- Reduces water consumption

Water consumption comes from drinking, washing up, toilets etc. “Humankind’s water footprint has surpassed sustainable stages in several areas around the world lately, which makes it essential to diminish both the direct and indirect water usage” (Green Office Environment Management System for sustainable organizations 2011, 11). A moderately sized building of 10,000m² typically consumes over 20,000 litres per day or more than 7 million litres per year, enough to supply 40 average homes. “Water heating in an office can account for 9% of the total energy load. While the cost of energy is alone self-effacing, water is paid more than once. It costs to buy water, heat it (hot water), and then to get rid of it (Sewage charges)” (Green Office Guide 2001, 18).

- Reduces Paper consumption

“Paper Production has a hefty environmental footprint. It influences the future of the world’s forests, endangered species, water resources, climate and people” (Environment Management System for sustainable organizations 2011, 10). Paper expenses can be almost halved just by printing double sided, about \$100 (about 80 EUR) on toner and \$30 (about 24 EUR) on ink can be saved by refilling the printer and toner cartridges.

In addition, waste disposal costs can be saved due to the reduction of the amount of waste generated (Green Office Guide 2001, 4). According to the Green Office Guide (2001, 4), the use of recycled paper saves trees. *“Every 100 reams of recycled office paper that is printed double-sided saves two trees, more than a tonne of greenhouse gas and almost a cubic meter of landfill space compared to 100 reams of paper that is not recycled or printed double-sided”*

- It improves corporate image

More than 70% of the world’s largest 500 companies are now addressing the global climate change in their corporate reporting. In addition, research has shown that businesses who demonstrate their personal environmental savings to their staff are 60% more productive. There is a major boost in the corporate image and customer satisfaction for greener companies. The trend at the moment is budget allocation in such a way that most companies allocate some portion of the budget to environmental initiatives. The motive for this can be either related to corporate image, company profit or the environmental awareness (Environmental and Energy management News, 2008).

- Reduces Transportation Costs

“Successful businesses may require some traveling, but sustainable organizations are able to cut down unnecessary transportation with the help of smart solutions such as phone and video conferences and distance work” (Environmental Management Systems for Sustainable organizations, 2011). The transportation issue is closely linked to the environment in many ways due to the numerous environmental problems that emerge. The relationships between transport and the environment are multidimensional.

The main environmental dimensions of transportation are related to the causes, activities, outputs and results of the transport systems. The most important impacts of transport on the environment relate to climate change, air quality, noise, water quality, soil quality, biodiversity and land (Rodrigue and Comtois). The green office concept can reduce or eradicate such impacts.

- Waste Generation

An organization uses a lot of materials, by refilling, reusing and recycling these materials it reduces the amount of waste and pollution generated. In addition, at least two kilograms of greenhouse gas per kilogram of product is saved by assembling equipment from recycled metals, plastics and other materials (Green Office Guide 2001, 4). “Avoiding waste generation is one the most straightforward ways to save natural resources or to diminish the ecological footprint” (Environment Management System for sustainable organizations 2011, 11). Waste generation includes pollution prevention: reducing or preventing the production of waste where it is feasible. In the production, use and disposal of most waste materials, greenhouse gas emissions are generated. Recycling of paper, corrugated, aluminum cans, plastic, metals, and other items avoids generation of greenhouse gases that would occur if other materials were used.

4 GREEN OFFICE EXAMPLES

Due to the various benefits from the programme there are a lot of organizations worldwide that are practicing the green office concept nowadays. These organizations include both public and private sector with more to join in the near future. Below are some benchmark organizations that have taken green office into practice in Finland.

4.1 CBS (Copenhagen Business School)

Copenhagen Business School abbreviated CBS has a project called CBS Goes Green which is aimed “to assess the impact of CBS on the environment, and ultimately to calculate Carbon Dioxide (CO₂) emissions”. The research which was done from the years 2008 to 2012 showed “An impressive 20% decrease in CO₂ emissions in only 4 years, which is halfway to the goal of 40% in 2020”. According to the same report, for future work, “the goal is to expand project by converting the energy use, water use and transportation into a business case”. In addition, “CBS are looking to expand the project with a seminar and paper series to further engage people on campus and external stakeholders” (Johnson A. M. et al. 2012, 4).

Furthermore in order to reach the goal it is important for CBS to involve both students and staff, as well as CBS as an organization by encouraging them to behave in a sustainable manner. The school mainly focused on goals which are “reducing energy and water consumption, increasing recycling and reducing waste, reducing non-green on-campus transportation, increasing responsible purchasing, developing carbon-neutral meetings and conferences, reducing paper consumption as well as acting as a Role model”.

According to CBS Goes Green Initiative, CBS focuses on three different pipelines; firstly, people; by working closely with students and employees on campus, strive to create a movement that will empower and continue the sustainable development. Secondly, technical measures together with campus services, they strive to find and implement the best technical solutions that will save energy on campus and sustainable living. Lastly, research; by benchmarking Universities like Harvard University, University of British Columbia, University of Copenhagen and BI Norwegian Business School.

The research strategy according to Johnson, A. M. et al (2012, 7) was based on: Analysis by Identifying Sources of CO₂ emissions, Targets by prioritizing in projects, Action Plan by communicating “how reductions can be achieved in understandable terms and make reduction relevant students and staff, Implementing Projects to reduce CO₂” and lastly evaluating; follow up and carry out continuous monitoring.

CBS research partners included where Campus services that provided numbers on waste and internal transportation, Business Intelligence “that provided numbers on water, heat and electricity consumption, via travel to provide numbers on CBS air travels, Others i.e. Employees at CBS have been contacted, for instance in order to obtain numbers on taxi transportation and work related travel in private vehicle”.

In my opinion, the research method used by CBS will act as a guideline to JAMK when dealing with the green office initiative as soon as it is taken into practice. Since the green office initiative in JAMK is in its early stages and nothing has actually been implemented yet, CBS Goes Green

initiative will act as an example on what should be done next and what main issues should be considered.

4.2 Aalto University Dipoli

The Aalto University Dipoli, “A Lifelong Learning Institute Dipoli operating as part of the Helsinki University of technology wants to be in the forefront of sustainable development. Aalto University Dipoli is also taking care of its own share of the third task of universities, social effectiveness. It means that Aalto University Dipoli wants to participate actively in executing the sustainable development program of Aalto University” (Aalto University Dipoli, 2011).

“Aalto University Dipoli is the first congress hall in Finland to be a green office-organization. As an important congress center and festival hall, Aalto University Dipoli wants to be a responsible actor in their field. Furthermore they need to be able to respond to needs of customers’ and interest groups. Aalto University Dipoli also has partners which have been acknowledged for their cooperation topmost Sodexho for catering and ISS Palvelut in charge of maintenance” (Aalto University Dipoli, 2011).

“According to the Aalto University (2011) practices involved the Green Office of Aalto University Dipoli and Environment includes:

- *Environmental program is updated yearly*
- *Aspire towards continuous improvement in our operations*
- *Follow up on achieved goals with chosen indicators and report information to the WWF annually*

- *They have a Green Office coordinator and working group in action*
- *Inform and educate personnel and customers about the Green Office*
- *Energy consumption monitored regularly*
- *Recycle paper, cardboard, plastics, bio waste, glass, metal and hazardous waste*
- *Donate unnecessary items to Otaniemi recycling center*
- *Print and copy double-sided*
- *Aim for more sustainable procurement policy*
- *Campus bikes for personnel"*

5.3 Finnish Embassy, Hanoi

Hanoi is one of the pilot embassies of the Ministry of Foreign Affairs of Finland which joined the Green Office concept. This is due to the new Finnish Development Policy in which Environmental sustainability raised up as one of the most important policies. There is already environmentally friendly attitude at the embassy as well as constant commitment of the whole staff (Implementation of the Green Office Programme in Embassy of Finland Report 2008, 3).

Like any other concept, the Green Office Programme has its goals and targets too which are short-term and long-term. Short-term targets were already achieved by January 2008 while Long-term from 2008-2010. The most important issue is that the staff is committed (Implementation of the Green Office Programme in Embassy of Finland Report 2008, 4).

According to the Implementation of the Green Office Programme in Embassy of Finland Report, the Embassy's Environment Management Plan includes:

Greening purchases which means buying environmentally friendly products and services in compliance with the legislation. For example purchasing products manufactured from recycled material, environmental desirable products, energy efficiency products, Bio based products, alternative fuels, use of fuel efficient vehicles and non-ozone depletion substances.

External and internal Communication meaning that there is communication between employers and employees within the organization (Internal) for example workshops and projects etc. and exchange of information and messages between a company and other companies, groups, or individuals outside its formal structure(External) for example marketing, advertising etc.

Training and motivating the staff through; informing about the benefits and the reason why such environmental programme is significant. For example, training employees to recycle as well as them on what amount of money can be saved every year when it's done.

Energy Efficiency in which the goal is to reduce the amount of energy necessary products and services. In addition, reducing exhaust emissions such as Carbon emissions (CO₂) which is also known as carbon footprint and lastly efficient use of materials.

4.4 Finnish Meteorological Institute

“The head office of the Finnish Meteorological Institute (Dynamicum) in the Kumpula district of Helsinki is included in the Green office programme run by WWF” according to the Finnish Meteorological Institute on the Green office environmental system. It also further discusses “The offices can reduce environmental burden, achieve cost savings and slow down climate change by partaking in this initiative. The Finnish Meteorological Institute desires to do its share in mitigating climate change in addition to conducting research into climate change” (The Green Office Environmental System)

“The Helsinki head office of the Finnish Meteorological Institute was granted the right to use the Green office logo on 26 June 2008 by WWF Finland”. WWF Grants a diploma and the right to use the Green Office label to an office whose environmental management system meets certain predetermined criteria (The Green Office Environmental System)

“In accordance with the Green Office programme, The Finnish Meteorological Institute:

- *Develops and implements an environmental programme;*
- *trains its personnel in environmental issues*
- *sets annual targets, monitors progress and reports To WWF”*

“The Green Office coordinator and the Green Office Team carry out the practical work. To ensure that the offices implement the Green Office system, WWF audits offices regularly” (The Green Office Environmental System).

4.5 Statistics Finland

Statistics Finland is part of the Green Office Network along with 170 other Finnish Organizations.

WWF granted Statistics Finland's Helsinki Office the right to use the Green Office logo to prove that Statistics Finland's environmental system fulfils the WWF Green Office required criteria. The criterion includes planning of an environmental programme, informing and educating of the personnel reporting about environmental matters. (Statistics Finland cares for the environment)

Statistics Finland's environmental programme emphasizes more on the reduction of energy consumption. For example, the targets in statistics production are increase of electronic data and expansion of electronic publishing. The aim of the programme is also to guide the personnel in choosing good practices that save the environment in printing, recycling and sorting and other everyday activities (Statistics Finland cares for the environment).

5 JAMK UNIVERSITY OF APPLIED SCIENCES

There are two divisions in Finnish Higher education; one is the Universities of Applied Sciences (Translated Ammattikorkeakoulu in Finnish) and the Universities. These universities are focused on working life and offer requirement based education. Universities of Applied Sciences like JAMK have more practical oriented studies than traditional Universities.

JAMK University of Applied Sciences is located in Jyväskylä a student friendly city with so many activities. It is an internationally oriented higher education institution with 8,000 students." JAMK offers first- and second-cycle degree education, open studies, continuing and vocational teacher

education. The working life needs is the basis of JAMK's education and contents of different curricula".

The institution is among the best in Finland with its numerous areas of study and it is amongst Finland's popular universities of applied sciences with encouraging prospects. The basic functions of JAMK are:

- Provision of higher education based on working life requirements
- Undertaking applied research and development supporting our education as well as working life and regional development
- Provision of adult education in order to preserve and boost the competence of professionals in the workforce

There 5 different divisions in the JAMK organization which are Teacher Education College, School of Health and Social Studies, School of Technology, Administration and the School Business and Services Management which is located in Dynamo Campus.

5.1 STRATEGY

The 3 major values of JAMK University of Applied Sciences are Responsibility, Trust and Creativity.

The core message that JAMK communicates to its customers is "Creating Competence". The Vision of the institution is

"To be the best university of applied sciences in Finland, with a strong track record in quality of education, internationalization and promotion of entrepreneurship" (JAMK Strategy 2015, 4)

JAMK's profiles include Quality of learning, internationalization and entrepreneurship. The focus areas are transformative Learning, well-being of families and promotion of health, Competence-intensive service business and Forest industry cluster.

JAMK's regional center of expertise is Bioenergy (JAMK Strategy 2015, 5). "In accordance with its mission JAMK University of Applied Sciences will be an internationally oriented forerunner in education and a strong player in practically oriented research, development and innovation activities" (JAMK Vision, Mission, Values, 2012).

"In February 2011, the School of Business and Services was accepted as a member of the Principles of Responsible Management Education (PRME) network. The mission of the initiative is to inspire and champion responsible management education, research and thought leadership globally" (JAMK Corporate Social Responsibility, 2012).

There are two things that JAMK pointed out in their first report on PRME progress concerning organizations practices. First JAMK has established an informal; open 'Sustainability Team' as a discussion and developing forum to advance social responsibility and sustainability in all functions of the organization. Secondly, the commitment to the WWF Finland Green Office environmental system was in spring 2012. The launching of the system is going to take place in two phases. During the first year JAMK are constructing the system, and during second year there will be observation, testing and further development (JAMK PRME Renewal of Commitment and Report 2012, 3).

5.2 PRME

The Principles of Responsible Management Education abbreviated PRME “are motivated by the United Nations Global Compact. They pursue to form practices of unremitting development among institutions of management education in order to improve the capability of a new generation of business leaders of managing the complex challenges faced by business society in the 21st century” (PRME, 2012).

There are six principles of responsible management education: Purpose, Values, Method, Research and Partnership.

“Corporate responsibility and sustainability have entered but not yet become fixed in the mainstream of business-related education in the current academic environment. Therefore, the PRME is an appropriate worldwide call for business schools and universities globally to adapt their curricula, research, and teaching methodologies as well as institutional strategies to the new business challenges opportunities” (PRME, 2012).

6 THE OBJECTIVE AND RESEARCH METHOD

The chapter focuses on the research methodology and attitude undertaken towards concise decisions. A Qualitative method was utilized in this research to find the required results. The allure of qualitative research is that it enables you to conduct an in-depth a broad array of topics, including your favorites, in plain and everyday terms (R. K. Yin, 2011 p.6).

The objective of this thesis is to analyse and know the current situation of the Green Office initiative in JAMK University of Applied Sciences Dynamo Campus and to find what kinds of steps should be followed in implementing the programme. Furthermore, the thesis will also consider the

principles and benefits of a green office as well as why an organization should undertake this concept. Most importantly, it will emphasize the main principles and requirements of the green office concept.

6.1 Research

The main research question is: What is the current situation concerning the Green Office concept in JAMK University of Applied Sciences? The aim of the question to define the practices has JAMK put in place so far in the implementation of the concept according to the elements and requirements.

Furthermore, the thesis will answer the question: What kinds of steps JAMK should follow in implementing the green office concept? The aim of the question is to outline what steps should be followed and the requirements involved.

6.2 Research Data and Analysis

The main type of Qualitative Data used in this research was Interviews which according to Patton, M.Q. (2002, 4) "it has open-ended questions and probes yield in depth responses about people's experiences, perceptions, opinions, feelings and knowledge. Data consist of verbatim quotations with sufficient context to be interpretable."

In-depth interviews, literature, articles and web publications were used to collect data for the research however there were not a lot of literature on the particular subject matter but there were more of electronic articles and web publications utilized. The semi-structured interviews

were taken in November 2012/February 2013 with open-ended questions and were recorded using a mobile phone. The interviewees were chosen because of their expertise and familiarity with the particular subject matter. The people interviewed were JAMK staff in charge of this green office program and the person in charge of the Green Office in Finland.

Only three interviews (Appendix 3) were taken altogether because a lot of information was given therefore further information would just be similar. Interviews took about half an hour and the interviewees (Appendix 3) were told why the interviews are being taken. The questions were not given beforehand however one of the interviewees asked for the questions beforehand but the answers got were clear and concise. The interviews were held in suitable atmosphere for both the interviewer and interviewee. All the questions asked were answered by the interviewees (Appendix 3) and a lot of important information was given. The interviews were transcribed after a few days so that the answers could be remembered in case of poor recording. Two different questionnaires (Appendix 1, 2) were made for the research, one to JAMK and the other to the WWF Finland Green Office.

Inductive analysis was used in this particular research that produced findings which were not identical and had non-overlapping components. Firstly the results analysis began by listening and transcribing the interviews. Since the answers were not corresponding, no answers were combined. The interviews were about 3 pages each in word format after transcribing and three (3) people altogether were interviewed in this particular research.

7 RESULTS

All the results were based on the answers from the interview. Each interview was analyzed separately and the research questions were compared to the conclusions found. Different themes were identified after the research as described by Bazeley, P. (2009).

7.1 Themes

The Green office concept

The results in general show that the green office concept is very important in organizations due to its numerous benefits. However, the process is quite long and it needs patience and commitment from the management, employees as well as other stakeholders.

“In general, you could say that the Green Office is a concept which is based on the same principles as any other environmental management system like ISO 4001 or EMA where you have to define your environmental impacts, most often of this electricity, energy, petrol, waste and procurement, use of materials specifically paper. You define those and then you decide the actions how to reduce the emissions/impacts then you have targets” Julkunen, M. 2012

The interviewee describes the green office concept and other environmental management systems (EMS) mentioned earlier by the author. In addition, the green office concept is a process which has its own elements which has to be taken care of. This process has to be always monitored and improved where necessary.

The Current situation

The results show that JAMK University of applied sciences have done a lot in this green office project and are still continuing to meet the requirements. A Green Office initiative is a long, ongoing process in an organization such as JAMK University Applied Sciences. It includes many phases, from implementation to improvement which is why JAMK still has a lot to do during this implementation process.

“At the moment JAMK is in a phase of analysis part where we analyze the current green office or the environmental situation. So basically we are analyzing the nature of the building (Dynamo) and all the other buildings in JAMK that are part of the green office. It is a 2 yr. process and its part of the so called JAMK responsibility programme and one part is greening the office and that’s why the WWF green office one tool so to say.” Lindroos, J. 2012

“Shortly, much has been done but I think much more need to be done. So I think basically we are thinking about waste management, much comes from laws and orders and in Dynamo waste management is belonging to the rent agreement. The problem is the attitude of people also staff as well as students if we are now thinking about waste management. Another big target is energy consumption and plenty of electricity costs in Dynamo come from Laboratories and kitchen. We have 3 important things waste, energy and paper.” Mäntylä, U. 2013

The results of the interview describe the phase where the organization is and how the concept has been approached. The importance of gathering information of the elements first has been emphasized. The factors mostly mentioned are waste, energy and paper, which are the main targets.

Furthermore, JAMK has launched a green office team (Appendix 4) from different departments. The Green Office team will communicate the green office system to the departments they are operating in. In addition, there is a student writing a green office internal communication plan for a WWF initiative. The student was chosen based on the applicants' background, competences and interest towards the subject (Appendix 4).

Why A Green Office?

There several reasons why organizations choose to adopt the green office as mentioned earlier. JAMK University of Applied Sciences has its own motive on why they are adopting the initiative.

“The purpose of JAMK adopting the green office concept is because in JAMK there is a so called pro environmental thinking which has existed in students curricula and projects that has not been enough when thinking about the current situation because at the moment many kind of office industry companies becoming more and more pro -environmental in some way in their core processes and also educational fields such universities. There have been a lot of projects or cooperation with different universities where JAMK has witnessed that it is good that to start utilizing the know-how and potential that it has about environmental issues. So it is about savings because in this kind of huge buildings (Dynamo Campus) it is possible to save a lot of money by decreasing like the energy and air as well as it is about image issues, financial issues , environmental issues because of many reasons basically in the whole society it goes together with the trend” Lindroos, J. 2012

Implementation Areas

This project will be implemented in almost all the campuses firstly the Dynamo Campus and Main Campus (Rajakatu) as well as the rest in the near future. The results from the research show that the project is ongoing and hopefully they will succeed in implementing in all JAMK buildings.

“When JAMK started the green office usually it’s the environmental management system itself is related to the offices and buildings. It has to come from the management so that’s why they are having discussions in the management level and then they deliver the results and etc. to all the different campuses that they started now taking just part of the few campuses Dynamo, Rajakatu, Puistokatu those basically” Lindroos, J. 2012

Main Principles in JAMK

An organization needs to have a good plan when undertaking the green office initiative as well as commitment from all parties involved in that particular organization. Reliable resources have to be available especially time and money.

“The main principle is the continuous improvement of the organizations; they also have to be committed to do it better and they have to get organized so they can get good results, they have to have the green office team and so on but the principles are also seeking the motivation why they have green office. One is cost savings, secondly is the image of the organization internally; they want to show to staff members that they carry the environmental responsibility especially when the younger people come to work they expect that the organizations are sustainable in their own functions and they are very disappointed when it doesn’t happen. Thirdly it is the customers; they require in their criteria that we buy the services only from the organizations that have the environmental program so the organizations have to have it.” Julkunen, H. 2012

“Basically the green office is an easy option for offices and campuses because the main principles are basically paper, waste, electricity and energy. In addition, purchasing; in JAMK there is so many different purchases and so called responsible purchases is one principle as well as also the use of water.” Lindroos, J. 2012

JAMK Green office elements

“This kind of offices people have traditionally used a lot of paper because there is a lot of printing material etc. but nowadays it is trend to move towards paperless offices and more and more elements will be used virtually meaning that JAMK will try to make an environmental communication campaign that promotes the use of printing two side print and you only print what you need those are small issues but they can make a huge impact. The same thing goes with energy JAMK cannot decrease everything but there is still so much that they can take out.”

Lindroos, J. 2012

“Purchases is something that because is guided by the EU legislation it is very strict for example JAMK has to opportunity make a competition available to all the small sized companies can also be on the market and offer them so basically purchasing is guided by the legislation.” Lindroos, J. 2012

JAMK has not calculated the amount of waste because it comes from all different functions. JAMK have so many different waste materials but especially the recycling of waste that is the first issue they are going fulfill; organic and plastic etc.” Lindroos, J. 2012

“Water is also one element basically there is automated water systems that once you put your hand on the pipe it will start bringing water and once you take it out it stops so many of them are

automated but of course it is controlled that they is not extra leaks and try to fix them so that system is running well.” Lindroos, J. 2012

Main Focus Area

“Green office is very broad it requires us to pay attention to all those elements that have been described but how JAMK will decide then the most important are waste, energy and paper those are the most relevant in the office environment and then JAMK has to decide, implement it like plan how to they will during this 1 yr. For example how JAMK will decide to and how much we want to decrease and then follow the procedure and then see after certain time where they are, how much have they decreased.” Lindroos, J. 2012

Statistics

There is only the following statistics at this point available: Electricity per year in Dynamo, Rajakatu and Puistokatu (7 months) is 4105385kW/h. Heat consumption per year Dynamo, Rajakatu and Puistokatu (7 months 6073100 kW/h. Water consumption 7567 (m3) per year in Rajakatu, Dynamo, and Puistokatu (7 Months). These figures were from 2011. The rest of the figures are being figured out at the moment in the process of implementing green office. Lindroos, J. 2012.

WWF and JAMK

“JAMK has been in contact with WWF Finland Green Office because the environmental system requires that organizations make a contract with WWF then announce interest towards the management system and then sign a contract then get access to this tool box where all the analysis is done and where companies indicate the processes how they have proceeded etc. and

WWF is sending a lot of nice information to all the members of the green office to participate in different talk shows etc.” Lindroos, J. 2012

Green office Effectiveness

“In the beginning of the project it is very effective. Organizations start from level zero. They also focus first on paper consumption it can be that in one year they have saved 20% or 25% which is a lot. In the beginning organizations get good results and some organizations get it for many years like electricity saving 1 or 2 % some organizations have like 10 or 15 % which is a lot for electricity in one year but the longer you are in the program the harder it is to find ways how you ‘can squeeze the results down..” Julkunen, H.2012

Importance of Green Office

“It is important for organizations like JAMK to implement the Green office initiative because of the same reasons; cost savings like WWF have many big universities Green Office initiative has already proven that it is good for the schools due to the numerous benefits; one reason is the cost saving even saving 1% is a lot of money but they have to figure out how to communicate to the students and the staff members that there is need to save electricity or paper also to have less waste.”

Julkunen, H. 2012

Different schools have been also been benchmarked in the interview and so far they have been positive impacts. Schools indeed use of money and funding sometimes is limited so initiatives like this can be useful.

8 FURTHER DEVELOPMENT

JAMK has followed the steps quite well so far by choosing a green office coordinator and launching green office team, which is doing some research and reporting back to the coordinator. So far, a lot of information has been gathered statistically and with more information being obtained. The next step after signing the contract with the WWF Finland should be to create an EMS in one year through the information provided by WWF.

The office will be inspected by WWF to determine whether it has the right to use the green office label after the EMS is ready. The organization (JAMK) has to report annually to WWF on the office updates and the EMS has to be developed and improved. JAMK should inform and educate the student and staff about the green office through the internal communication plan. Targets and goals have to be set numerically, and they have to be monitored for the fulfilment of those goals.

Any further development would be to have a green office action plan by determining the key focus areas each with has exact behaviours aimed to achieve the goals that have been set and to adopt the significant principles. The action plan should give some guidelines that all parties can follow easily and should let everyone from staff to students know about it.

9 CONCLUSION

In conclusion, JAMK has taken a major step just by deciding to implement the Green Office initiative. The major issue emphasized is commitment to the project from the management and all staff in the organization. The attitudes of people in an organization like JAMK for example students and staff; can prove to be another major factor in implementing this project.

It is important to have this Green Office concept in an organization. It has its benefits that can be seen after a few years of implementation. The most importantly is the image of the organization, nature and learning of the students at JAMK University of Applied Sciences. One issue the author came across in during the research is that the student should be taught about the green office concept in orientation to keep them informed what is going on in the school. The awareness of the students will determine whether the project works or not.

Continuous improvement should be on the managements' agenda at all times whether they have already gained or not. The most common principles in the Green Office Concept were the benefits arise from are paper, waste, electricity and energy. All these factors have to be analyzed statistically including observation of how they are being used in the organization.

Lastly, JAMK University of Applied Sciences should be able to succeed in this green office initiative and fulfils its goal. If the right requirements are met, the benefits should be showing already in the near future since it is not possible to see the benefits right away. It is good that JAMK University of Applied Sciences has joined other Universities of Applied Sciences in implementing the project.

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APPENDICES

APPENDIX 1: Questionnaire to JAMK

1. What is the current situation in JAMK Dynamo Campus regarding the Green office?
2. Why is JAMK adopting the green office?

3. Where is this project going to be implemented?
4. What main principles would be considered in the implementation?
5. How would you describe JAMK's activities towards the following green office elements :
 - Energy Consumption
 - Water
 - Waste
 - Purchasing
 - Paper Consumption

APPENDIX 2: Questionnaire

1. How would describe a Green Office as an environmental management system in general?
2. What are the main GO principles organizations have to follow in implementing the concept?
3. Why is it important for organizations like JAMK to implement such initiative?
4. What are some benefits JAMK should expect if the Green Office is implemented?
5. How effective has the Green Office initiative been to organizations who are implementing it?
6. As the Green Office Manager how would you encourage organizations like JAMK who are considering implementing the GO concept?
7. Do organizations face challenges while implementing the GO initiative?
8. What kind of challenges and how do you help them solve them?
9. Do you have any future development plans for WWF Finland Green Office initiative?

APPENDIX 3: List of Interviewees

Julkunen, H. 2012 - Green Office Manager, WWF Finland, interviewed on 25.10.2012

Lindroos, J. 2012 Asiantuntija, Specialist

Liiketoiminta ja palvelut –yksikkö (Business and Services), interviewed on 14.11.2012

Mäntylä, U. 2013 Palvelupäällikkö, Facility Services Manager
Hallintoyksikkö (Administration Unit) Interviewed on 22.2.2013

APPENDIX 4: JAMK Green office team

Lindroos, J. Lindroos, J. 2012 Asiantuntija, Specialist, Liiketoiminta ja palvelut –yksikkö (Business and Services)

Mäntylä, M. Palvelupäällikkö, Facility Services Manager Hallintoyksikkö (Administration Unit)

Hiltunen, T. Turvallisuuskoordinaattori-palveluohjaaja, Safety Coordinator,

Hallintoyksikkö (Administration Unit)

Hypén, S. (School of Health and Social Studies)

Ilkka, A. Hallintoyksikkö (Administration Unit)

Demirel, M. Teacher Education Centre

Rand, I. School of Technology

Bäckström, M. (Student) writing thesis on Internal Communication Plan

FIGURES

FIGURE 1: EMAS CYCLE

FIGURE 2: WWF GREEN OFFICE LOGO

FIGURE 3: WWF's Growing Green Office Network